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ANNUAL REPORT

1988-89

Occupational Health & Safety Heritage Grant Program.

LEGISLATIVE ASSEMBLY
EDMONTON

Heritage Fund

91-04915/

The Occupational Health and Safety Heritage Grant Program is one of Occupational Health and Safety's major prevention programs. Established in 1981, through a $10 million capital investment of the Alberta Heritage Savings Trust Fund, the program has a unique mandate: to support education and research projects which address health and safety problems related to work. No other program in Alberta has this mandate. No other source of funds is available to support the initiatives stimulated and sponsored through this program.

The Grant Program is now in its ninth year of operation. Through this program, high quality educational programs have made occupational health and safety training available throughout Alberta. New instructional materials and training courses have been developed to address health and safety problems in a variety of hazardous occupations and industries, including forestry, oil and gas, utilities, construction, manufacturing, and transportation. Over 73,000 copies of grant-produced materials have been distributed to the public. Researchers have investigated important occupational health and safety problems. The Grant Program has also supported several occupational health and safety conferences held in Alberta.

From a university:
"Generally speaking, (the grant project) has had a significant influence on our department and its future plans. Several of our faculty members have become involved in research related to occupational health issues who likely would not have participated otherwise. Also (our department) has become more involved in educational activities relating to occupational health, and we have been able to mount a small business information and referral clinic."

The program will continue to work in partnership with industry, labour, post-secondary institutions and others, encouraging Albertans to become involved in finding effective solutions to health and safety problems in the workplace.

2 PROGRAM DESCRIPTION

A great variety of organizations and individuals have designed and carried out Occupational Health and Safety Heritage Grant Program projects. These include Alberta industry and safety associations, educational institutions, businesses, unions, non-profit societies, and individuals. Based on the 1985 recommendation of the Standing Committee on the Alberta Heritage Savings Trust Fund Act, special emphasis has been placed on involving post-secondary educational institutions.

Applications are evaluated on a competitive basis by the Grant Steering Committee. The Committee is a panel of four public and seven Alberta government representatives who assess applications and make funding recommendations. The Committee is assisted in its evaluation by technical and peer group reviews obtained for each application.

Most approved projects are funded for one year. Exceptional projects of a large scale and complex nature may receive funding over a longer period.

The Grant Program is administered by program staff comprising an administrator, a research officer and a secretary.

Staff monitor the progress of funded projects through telephone calls, correspondence and site visits. Staff throughout Occupational Health and Safety provide valuable guidance to grant recipients on the design and development of their projects and help to promote the outcomes of completed projects.

From an oil industry association: "(The grant project) changed the direction of our organization. Previously, we were involved in about 70% education and 30% safety; now it's the reverse. Our association always wanted to do something more in occupational safety, but wasn't able to until the program came along."

From 1981 to 1989 the Grant Program received 481 applications. Of these, 170 were approved.

Twenty-one applications were approved in 1988/89, compared to 16 the previous year. The number of projects, received and approved by fiscal year, are illustrated in Figure A (page 8).

Funds awarded by project type are shown in Figure B (page 9). Education projects have received 51% of all grant funds. Research projects have received 46% of all grant funds, and conferences have received the remaining 3%.

From a union:
"Many of the instructors that received training through participation in our project now teach continually and many others have gone on to get advanced training."

Figure C (page 10) illustrates the Grant Program's expenditures from 1981 to 1989. Grant expenditures increased 55% in 1988/89, compared to the previous fiscal year.

Forty-five percent of all projects have outcomes or results which can be applied in more than one industry. For example, a series of videotapes on welding hazards is being used by firms in many different industries. Most of these industries have very high accident rates. They include oil and gas well drilling and servicing, forestry, transportation, construction, and mining. Nineteen percent of all funds have been awarded for projects relating primarily to the oil and gas industry.

Technical institutes, colleges, vocational centres, and universities have received 51% of grant funds, reflecting the 1985 recommendation of the Standing Committee on the Alberta Heritage Savings Trust Fund Act, placing special emphasis on involving post-secondary educational institutions. Nineteen percent of grant funds were awarded to employer or industry associations. Other groups receiving funds include unions, professional associations, consultants, and municipalities.

From the utility industry:
"Workers who have seen our video are certainly more aware now and understand the problems better. Also manufacturers have changed the design of the equipment and the engineering department in our company has changed some of their procedures."

4 PROMOTION OF PROJECT RESULTS

Industry, labour and professional associations receive grants to address health and safety problems at the workplace. By funding these groups, which are in a position to directly apply the solutions developed, the Grant Program aims to maximize benefits to Alberta workers.

Educational institutions have also received significant support from the Grant Program. Institutions across Alberta have developed new courses, or updated existing courses, and continue to offer these to the public. The benefits will be long lasting as workers and students are able to pursue professional and job-related occupational health and safety training which was previously not available in this province.

Since 1987 the Grant Program has surveyed grant recipients to find out how they have disseminated the results of their projects. Information was received from 78 completed projects. Since 124 projects are completed, information is available for about 60% of all completed projects. The results of projects presented in the following table understate the actual dissemination of results.

From a university:
"We are now able to give advice on working with chemicals, types of respirators, and protection from noise, dust, and fumes, for example."

In addition, all research reports, books and manuals produced with Grant Program sponsorship have been placed in the Occupational Health and Safety Library for public circulation. The library serves industry and the public throughout Alberta. Materials are also sent to the National Library of Canada and the Canadian Centre for Occupational Health and Safety.

Reports describing ongoing and completed projects are also distributed to the public. The reports are provided to a variety of groups and individuals including: occupational health nurses and safety practitioners employed in industry, organizations interested in occupational health and safety (such as hospital associations and municipalities), and

individual workers and organized labour. Information on funded projects is also available from the status reports, the Occupational Health and Safety magazine, the Canadian Centre for Occupational Health and Safety data base, the news media, and from grant recipients.

From the forestry industry: "Foremen in the bigger companies are using our manuals to develop safe practices and to increase production. Also, the Chain Saw manual has been distributed by retailers in Alberta with the purchase of each chain saw."

Impact of 78 Completed Grant Projects

Copies of reports, booklets, videotapes in circulation	72,915
Courses available from educational institutions and industry groups	29
Workers, employers, and health and safety professionals trained in these courses	19,600
Presentations of results at conferences, industry and professional association meetings	245
Research reports produced	46
Books and manuals published	29
Articles in journals	88
Papers in conference proceedings	31
Videotapes or films produced	20
Public use of videotapes from the Occupational Health and Safety Library	990
Articles in the Occupational Health and Safety Magazine on Grant Projects	77

FOLLOW-UP TO THE PROGRAM EVALUATION

Collecting information on promotional activities carried out by grant recipients was one of the recommendations made as the result of an evaluation of the Grant Program. In early 1986, a major evaluation study was initiated by the Occupational Health and Safety Division to examine the operation and impact of the Grant Program. As a result of another recommendation, a small computer system was developed to track information on grant applications and awards. The system is now in place and is improving the timeliness and accuracy of responses to information requests.

From a university:
"Most of our graduates are now working in the occupational health and safety field in Alberta."

The evaluation consultants, T.D. Weiden and Associates Ltd., concluded that the Grant Program has played a major role in: stimulating non-government sectors to take action to improve workplace health and safety; establishing permanent programs in industry, labour and educational institutions to address occupational health and safety concerns; developing new strategies and materials to prevent work-related illnesses and injuries; and increasing the numbers and expertise of individuals trained in occupational health and safety.

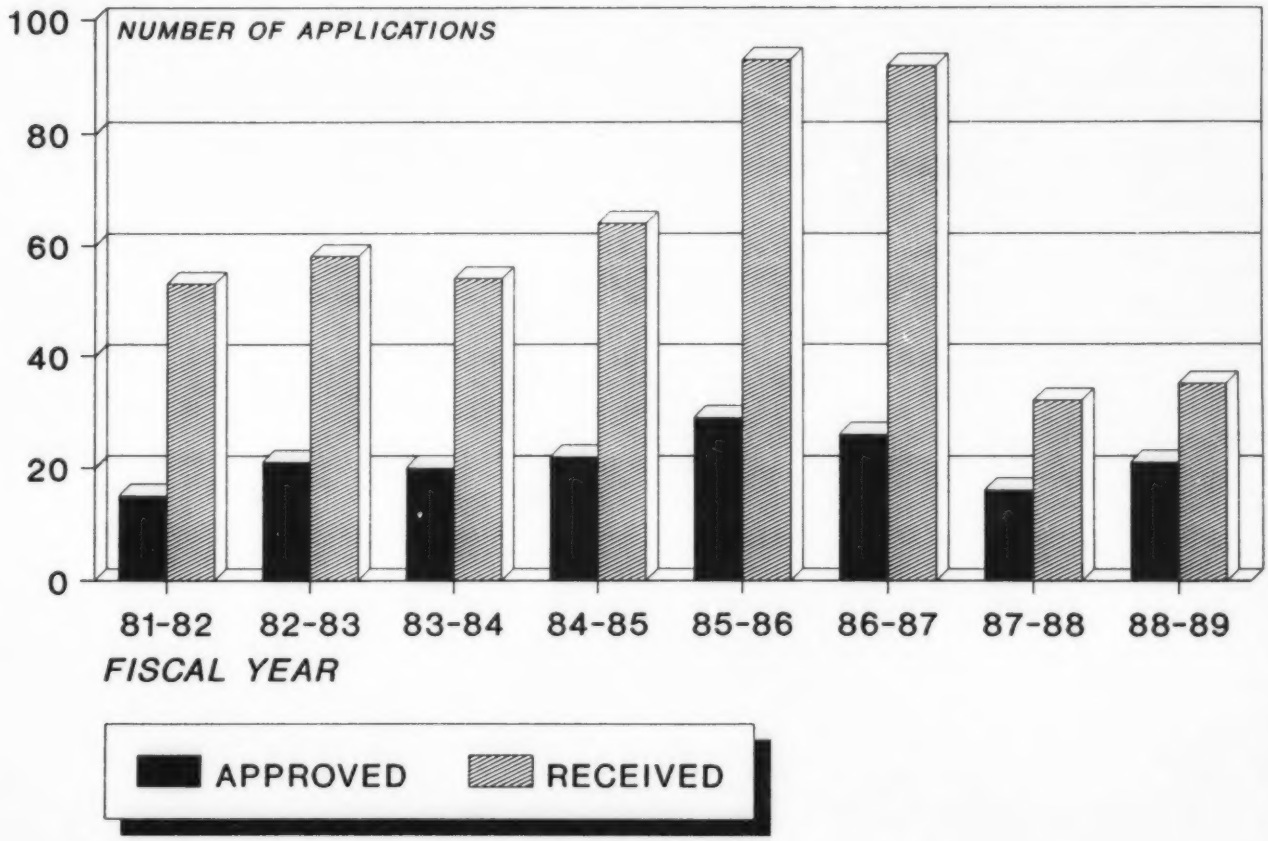
The evaluators warned against discontinuing the Grant Program without an alternative mechanism for supporting the initiatives established. The impressive gains made through this program would erode without some similar source of funds. The program is now scheduled to continue until 1990/91, in order to expend the original $10 million investment.

From a construction industry association:
"Because of the support we received from the program, we were able to hire professionals, independent of grant program funds, who can devote all of their attention to safety. Previously, those of us in the head office had to take up safety issues along with our other duties."

FIGURES

8 FIGURE A

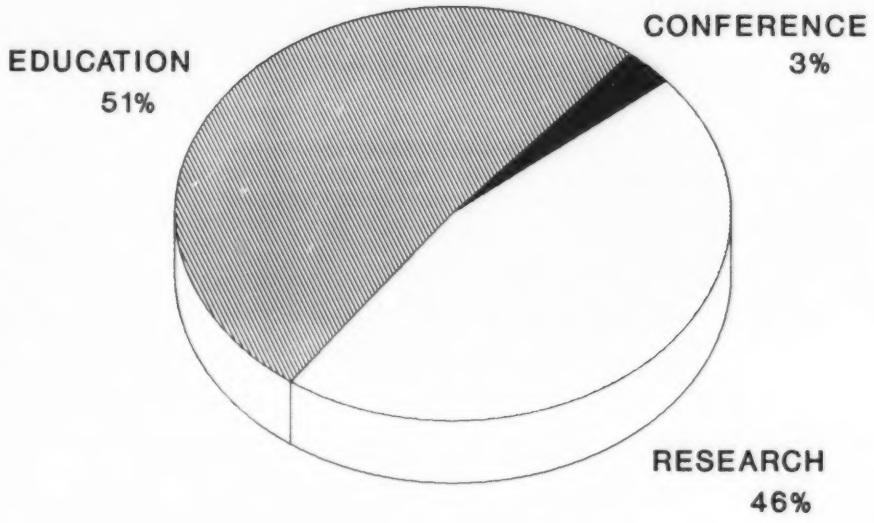
Applications Received
And Approved
April 1981 - March 1989



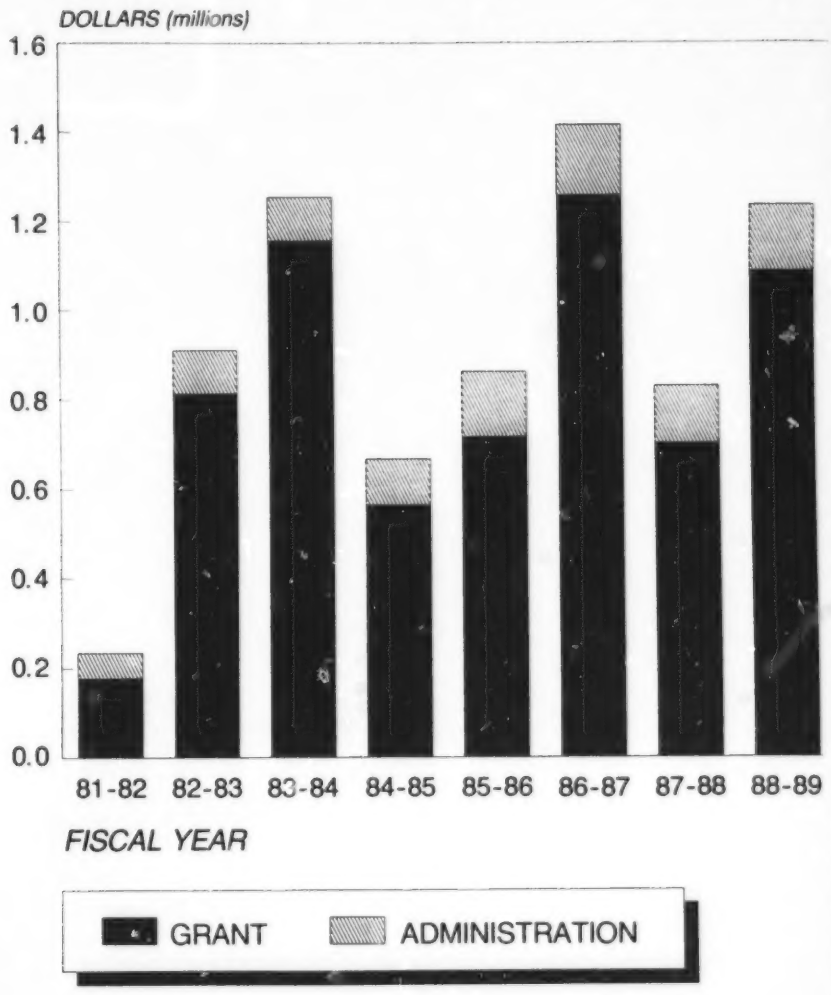
NOTE: Total number of applications approved: 170

F I G U R E B 9

Funds Awarded By
Grant Type
April 1981 - March 1989



Program Expenditures
April 1981 - March 1989



APPENDICES

12 APPENDIX I

Types of Awards

Education Grants

Three types of education projects are funded. **Program Development Awards** are used to develop innovative educational programs which emphasize the recognition, avoidance and control of hazards related to work. Funds may also be provided to evaluate the effectiveness of new educational programs. Program Development projects are the most common type of education grant awarded.

Visiting Scholar Awards sponsor scholars or researchers travelling to Alberta for the purpose of information exchange through seminars, lectures and collaboration with Albertans in the development of new techniques or approaches in the field of occupational health and safety.

Training Assistance Awards provide support for individuals to pursue further education in disciplines and subjects related to occupational health and safety, such as occupational hygiene or occupational health nursing.

Research Grants

Research grants support scientific activities designed to increase the understanding of occupational health and safety problems, and to develop and assess new strategies for dealing with problems. Research is conducted to fill gaps in knowledge or provide information required to solve problems. With new knowledge, it is often possible to develop both technical and procedural solutions to safety problems. Solutions may include the design of new equipment, and the development of safe operating guidelines and procedures.

Conference Grants

Conference awards provide partial support for conferences in Alberta which increase understanding and awareness of health and safety issues related to work. Grant funds are normally used to defray the costs of bringing experts to the province, and of planning activities. Albertans may also receive support to attend conferences which enhance the knowledge and expertise of occupational health and safety practitioners in the province.

Projects Approved Between April 1988 and March 1989

Education Projects

Work Site Traffic Accommodation Guidelines
Alberta Roadbuilders and Heavy Construction Association ($9,000)

The Grant Program provided partial funding to develop a booklet for superintendents of road work crews. The booklet provides standardized guidelines for the safe and efficient movement of traffic around roadway construction. Topics covered include signs and barricades, flag persons, emergency planning, and site security.

Canadian Occupational Health and Safety Week
Alberta Association of Safety Personnel ($39,500)

This project promoted the 1988 Occupational Health and Safety Week throughout Alberta. Educational materials were prepared on the theme "Safe at Home, Safe at Work"; information displays were taken to shopping malls; pins, buttons, and stickers were distributed; advertisements were placed in newspapers and on the radio; and an occupational safety seminar was held.

Woods Worker Safety Program - Phase II
Alberta Forest Products Association ($52,100)

A comprehensive Chain Saw Operator's Course and Instructor's Guide has been developed by the Association. The materials are designed for use by foremen, to teach safe work practices to forestry industry workers. The materials were pilot tested on two groups of workers and revised, before being printed and distributed.

Safe Community Project - Red Deer and District
Alberta Cities Safety Association ($60,000)

Lifestyle and attitudes are key to each individual's safe conduct at home, at the workplace, and during leisure time. A positive attitude to safety cannot be achieved in any one area, for example at the work site, if the same attitudes and perceptions are not employed in each of the other areas. The program brings together existing programs, begins new ones, and brings people together with the common goal of promoting health and safety in the community.

Occupational Health Services Planning Project
Victorian Order of Nurses ($14,000)

Funds were provided to develop preliminary plans for delivering occupational health services to industry. The feasibility of the Victorian Order of Nurses developing a self-sufficient program was assessed.

Development of Safety Engineering and Management Instructional Materials - Phase II
Faculty of Engineering, University of Alberta ($30,000)

The Faculty of Engineering is developing a two-term course in safety engineering and management, for final-year undergraduate business and engineering students. The Faculty has established important ties with industry and government, and the courses will provide relevant safety information and skills for students.

Program to Prevent and Manage Aggressive Behaviour in Residents of Long Term Care Facilities
Alberta Extended Care Safety Council ($8,500)

The Alberta Extended Care Safety Council is developing a self-study program for workers in long term care facilities. Some workers have sustained injuries from attacks from aggressive residents. The materials will train workers to deal effectively with aggressive behaviour from residents. The materials will be suitable for use in a large number of Alberta facilities.

Research Projects

A Multidisciplinary Assessment of Low Doses of Hydrogen Sulfide - Phase III
Faculty of Medicine, University of Calgary ($187,600)

Dr. Sheldon Roth and colleagues continue to study whether low levels of hydrogen sulfide alter the structure and function of various tissues. They are examining how extended, low levels of exposure relate to behaviour, neurological function, tissue biochemistry and genetics. Results will be used to develop better treatments for hydrogen sulfide poisoning, and ways to protect the health of workers who may be exposed to low levels of hydrogen sulfide.

Head Injury, Memory Impairment and Occupational Safety - Phase III
Department of Psychology, University of Alberta ($48,900)

Head injury can produce subtle memory and cognitive impairments. Drs. Allen Dobbs and Brendan Rule are continuing to develop and validate a battery of tests, reflecting recent research in psychology, to detect such impairments. Similar tests may be useful in assessing the effects of exposure to solvents and hydrogen sulfide. These tests could help to improve job counselling and placement to avoid unsafe or impaired performance on the job. They may also help to improve the adjudication of Workers' Compensation Board claims, and indicate when it is safe for a worker to return to the job.

Illness Experience of Fire Fighters - Phase III
Department of Health Services Administration and Community Medicine, University of Alberta ($64,500)

Drs. Tee Guidotti and John Markham continue their research on whether fire fighters experience a greater incidence of certain illnesses due to the nature of their occupation. The mortality profile of fire fighters is being compared with that of other male populations of Albertans. The researchers are examining the distribution of cause of death, especially with respect to lung cancer, chronic obstructive lung disease and cardiovascular disease.

Recycling and Disposal of Chemical Wastes - Phase VII
Department of Chemistry, University of Alberta ($53,300)

Dr. Margaret-Ann Armour and her colleagues are continuing their research into the development of safe and practical methods to dispose of or recycle small quantities of waste or spilled hazardous chemicals. In the current phase, chemotherapy drugs and other carcinogenic chemicals are being studied. The methods will benefit hospital workers, as well as workers in research, teaching, analytical, and quality control laboratories. The disposal methods take into account Alberta regulations and conditions.

Neurological Actions of Sulfide - Phase III
Department of Pharmacology, University of Alberta ($99,750)

Dr. Rhoderic Reiffenstein and colleagues are examining the effects of sulfide on neurological functioning and on selected behaviours. The results will provide information which may help to improve treatment following hydrogen sulfide poisoning and lead to more effective preventive procedures.

Evaluation of Seismic Geophysical Equipment in Identifying Hazardous Tunnelling Conditions
EBA Engineering Consultants ($15,500)

EBA Engineering Consultants evaluated four methods for predicting hazardous tunnelling conditions in urban areas. The methods are successfully being used at coal mines. The methods were not found to be better predictors than other methods currently used in urban areas.

Occupations of Alberta Women with Cancer
Alberta Cancer Board ($25,400)

The Cancer Board is compiling occupational histories of Alberta women who have developed cancer. The data will be analyzed to see whether cancers are associated with occupational exposures. A similar data base already exists for men.

Feasibility Study - Establishment of Joint Neurotoxicology Group
Faculty of Medicine, University of Calgary ($10,000)

Researchers are investigating the feasibility of establishing a joint neurotoxicology program involving researchers at the University of Alberta and the University of Calgary. The researchers will develop a plan to establish a program. Funding for the feasibility study has also been provided by the Alberta Heritage Foundation for Medical Research.

Conference Projects

Round Table on Occupational Health and Safety in Alberta
The Banff Centre School of Management ($55,400)

Two conferences are planned for representatives from industry, labour, and government. The conferences will address the need for a comprehensive and coordinated strategy to deal with occupational health and safety issues in Alberta, and the need for senior management to buy into the strategy. Consensus will be sought on key issues facing the major stakeholders, and an integrated action plan will be developed.

International Conference on Hydrogen Sulfide Toxicity
Sulfide Research Network ($13,500)

An international conference on hydrogen sulfide toxicity was held in Banff in June 1989. International and national experts and conference registrants discussed and critiqued recent research, the majority of which is taking place in Alberta.

Backs for the Future, 1988
Alberta Hospital Association ($3,125)

Assistance was given to produce videotapes of this national conference, which was held in Calgary in March 1988. Producing videotapes of the sessions makes the conference information available to all employers, workers and the public.

CCOHS Statistics Workshop: Labour Involvement
Alberta Federation of Labour ($3,855)

Twelve representatives from the Alberta labour movement attended the Canadian Centre for Occupational Health and Safety's two-day statistics workshop in Edmonton, March 1989.

Industry Participation in "Workshop on Occupational Health and Safety"
Alberta Construction Safety Association ($2,490)

Six small business owners representing hazardous industries attended the Canadian Centre for Occupational Health and Safety's statistics workshop in Edmonton, March 1989.

23rd Congress of the International Commission on Occupational Health - Montreal, 1990
Grant MacEwan Community College ($3,000)

The award is allowing an Alberta member of the Organizing Committee for the 23rd International Congress on Occupational Health to attend several planning meetings for the congress.

APPENDIX III

Grant Steering Committee

The Grant Steering Committee was established in April 1981 by the Minister responsible for Workers' Health, Safety and Compensation, to ensure that a broad range of perspectives and expertise contributed to development of the Grant Program. Following a recommendation of the Standing Committee on the Alberta Heritage Savings Trust Fund Act, four public members were appointed to the Committee in January 1985.

The Committee reviews applications for grants and makes recommendations regarding funding. The Committee also advises the Minister responsible for Occupational Health and Safety generally on matters related to operation of the program. Such matters may include program administration, funding priorities and promotional activities.

Between April 1981 and March 1989 the Committee met 67 times to review and make recommendations on program guidelines, funding criteria and grant applications.

On March 31, 1989, committee membership included four public representatives and seven representatives from six provincial government departments and agencies.

PUBLIC MEMBERS

Labour Representatives

Mr. S. Lee, Building Trades Council (retired)
Edmonton

Mr. P. Oakes, United Steelworkers of America
Grande Cache

Employer Representative

Mr C. Delbridge, Brockham Oilwell Servicing (1986) Ltd.
Edmonton

Public Representative

Mr. K. McBeth, Oilfield Servicing (retired)
Edmonton

ADVANCED EDUCATION

Mr. W. Novasky, Director, Program Coordination Branch

CAREER DEVELOPMENT AND EMPLOYMENT

Mr. D. Coupal, Planning Coordinator

LABOUR

Mr. A. Kennedy, Assistant Deputy Minister, General Safety Services Division

OCCUPATIONAL HEALTH AND SAFETY

Mr. W. Rozel, Executive Director, Work Site Services

Mr. M. Taylor, Deputy Director, Technical Services Branch

PERSONNEL ADMINISTRATION

Mr. H. Gerling, Manager, Occupational Health and Safety Branch

WORKERS' COMPENSATION BOARD

Mr. I. Hershman, Vice President and Chief Development Officer